Honorable David Bennett
Chair, House Environment and Natural Resources
Committee Rhode Island General Assembly
82 Smith Street
Providence, RI 02903

RE: Oppose- RI HB 7515 Microplastics Reduction Act

April 4, 2024

Dear Chair Bennett and Members of the House Environment and Natural Resources Committee,

The American Chemistry Council (ACC) is a national trade association representing chemicals and plastics manufacturers in the United States, including member companies in Rhode Island. Our members are committed to the safety of their products and to the protection of public health.

Chemistry provides significant economic benefits in every state including Rhode Island. Thanks to chemistry, our lives are healthier, safer, and more productive than before. Use of plastic products can also help fight climate change and support achievement of sustainability goals.

ACC supports Rhode Island legislators' efforts to protect its communities, environment, and natural resources; however, we respectfully oppose HB 7515, a bill that would ban the sale, offer or distribution of into commerce any product containing synthetic polymer micro particles beginning January 1, 2028, for the following reasons:

23-19.19-3. Elimination of microplastics

This bill puts in place a ban on polymer micro particles without completion of a science-and-risk based assessment.

A science- and risk-based system is necessary to better understand the potential risks from microplastics. This bill bans micro particles *before* the evaluation of data from studies of soil, water, and other media or development of a strategy to reduce microplastics.

As a general principle, ACC supports funding research necessary to close information needs identified by the World Health Organization and to inform risk assessment. Several critical measures are needed to ensure that regulators have access to high quality data, and include:

- Adoption of a standardized definition for microplastic and supporting definitions to avoid uncertainties when enforcing the regulation.

- Development and adoption of standardized and validated analytical methods to accurately measure microplastics in various environmental media.
- Development and use of scientifically robust hazard screening and testing methods, including quality assurance and quality control criteria for hazard testing, and reference materials.
- Adoption of a risk assessment framework that addresses the complexities of microplastics, hazards and exposures.

Section 23-19.19-2 Definitions

This bill is based on the premise of a widely agreed upon, science-based definition of "microplastics." There is however currently no globally recognized definition of microplastic.

A single definition of microplastics should be adopted based on those developed by consensus driven processes such as the ASTM and ISO organizations would help prevent ambiguity between scientists and regulators. There are other critical definitions that if adopted, would offer clarity.

ACC recommends consideration of the following definitions for the purposes of the bill:

- "Plastic" is defined as a material which contains as an essential ingredient one or more organic polymeric substances of large molecular weight, is solid and insoluble in its finished state, and at some stage in its manufacture or processing into finished articles can be shaped by flow.[1]
- It is important to distinguish between MNPs of different sizes and shapes as these characteristics may confer different physical, chemical, or toxicological properties. Therefore the following definitions are proposed:
  - The term "Microplastic" or "Microplastics" is defined as Plastic that has at least three dimensions that are less than or equal to (≤) 5 millimeter (mm) and greater than or equal (≥) to 1 micrometer (μm).
  - The term "Nanoplastic" or "Nanoplastics" is defined as Plastic that has at least three dimensions that are having a size range that is less than (<) 1 micrometer (μm) and greater than or equal to (≥) 1 nanometer (nm).
  - The term "Microfiber" or "Microfibers" is defined as Plastic that has at least two dimensions that are less than or equal to 5 mm, length to width and length to height aspect ratios of greater than 3, and a length of less than or equal to (≤) 5 millimeter (mm).
  - Together, the terms "Microplastics", "Nanoplastics", and Microfibers can be termed "Micro-nanoplastics" (MNP).
- In order for a regulation to be enforceable, it is critical that any detection or quantification methods be reliable and have undergone a rigorous quality assurance/ quality control (QA/QC) process based on the state of the science.

[1] ASTM D883 defines plastic as "a material which contains as an essential ingredient one or more organic polymeric substances of large molecular weight, is solid in its finished state, and at some stage in its manufacture or processing into finished articles can be shaped by flow."

- Therefore, we propose, the term "Technically Feasible Size Limit" is defined as the lowest size bound that can be consistently and reliably measured for purposes of regulatory enforcement.
- The current Technically Feasible Size Limit is 100nm in any dimension.[2,3]
- MNPs are comprised of different polymers and materials. The use of the terms "synthetic," may have unintended negative connotations associated with it without providing any additional clarity. The bill should consider alternative terms that are more scientifically accurate. Currently, scientific literature does not support the conclusion that MNPs from one source have different potential environmental impacts.

- It should also be noted that the current definition used in the bill would classify dyed wool as a "synthetic polymer microparticles." It is likely that many other polymer types would be unintentionally classified under such a non-specific definition.
  - Some MNPs have been designed to (bio)degrade once they enter the environment or are water soluble. Definitions that identify these MNPs should be adopted:
- The term "(Bio)degradable Plastic" refers to a Plastic that meets accepted (bio)degradable criteria using a weight-of-evidence approach and/or test methods recognized by the Environmental Protection Agency or other internationally recognized standards under relevant environmental conditions in the most relevant environmental compartment(s).[4] Abiotic degradation itself is not sufficient to meet the requirements for a (Bio)degradable Plastic.
- The term "Water Soluble" refers to a Plastic has a water solubility > 100 mg/L.[5]
  - The definition of "Product" in the bill is broad and encompasses consumer products, agricultural products, medical applications, etc. The bill should specify the application it intends to cover.

If adopted, the following materials should be exempted to focus the bill and ensure enforcement is achievable:
EXEMPTIONS: The terms, Microplastic, Nanoplastic, and MNP shall not apply to Plastic that are:

- Below the size limitations under "Technically Feasible Size Limit";
- "(Bio)degradable Polymers";

[2] An EPA publication noted that today's technologies can only reliably detect microplastic particles down to 5 μm in limited circumstances. U.S. EPA. (2022). Memorandum: Implementation of the Clean Water and Drinking Water State Revolving Fund Provisions of the Bipartisan Infrastructure Law. https://www.epa.gov/dwsrf/bipartisan-infrastructure-law-srf-memorandum.
[3] ECHA noted in the final EU regulation restricting intentionally added microplastic particles that a practical lower limit of 100nm is necessary due to technological limitations. Commission Regulation (EU) amending Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as regards synthetic polymer microparticles. https://ec.europa.eu/transparency/comitology-register/screen/documents/083921/1/consult?lang=en.
[4] International standard setting organizations may include ASTM, ISO, or OECD.
[5] ISO and OECD test guidelines (e.g., OECD TG 23) define a 'poorly soluble substance' in water as < 100 mg/L.

- Water Soluble, or;
- Do not contain carbon atoms.

23-19.19-4. Microplastics testing
<u>ACC recommends only the use of proper QA/QC testing protocols for microplastics.</u>

The development and adoption of standardized analytical methods, test methods, quality assurance and quality control criteria, and reference and test materials would ensure measurements of microplastics in the environment are comparable and able to be replicated across laboratories.

- ACC is engaged in such research to develop standardized materials and methods for use in the academic and regulatory community. We recommend the following:
  - Only testing protocols with proper QA/QC should be used to test for microplastics in the environment for this bill's purposes.
  - An appropriate risk assessment framework should be used to assess the potential impacts of microplastics due to their complex mixture of sizes, shapes, and compositions.
- A risk assessment framework, such as the one developed by Koelmans et al. (2022), that can assess for these physicochemical variables without making artificial categories is critical in determining what property of a microplastics may pose a risk to health or the environment.[6]
  - When assessing the potential risks of MNPs, a weight of evidence analysis should be used to determine probable effect mechanisms that elicit an adverse effect.[7,8]

Thank you for the opportunity to provide comments. Please feel free to reach me at Margaret_gorman@americanchemistry.com if you have any questions.

Sincerely,

Margaret M. Gorman
Senior Director, Northeast Region American Chemistry Council

[6] Koelmans, AA et al. (2022). Risk assessment of microplastic particles. Nat Rev Mater. 7:138–152. https://doi.org/10.1038/s41578-021-00411-y
[7] Bucci, K et al. (2020). What is known and unknown about the effects of plastic pollution: a meta- analysis and systematic review. Ecol. Appl. 30: e02044.
[8] de Ruijter VN et al. (2020). Quality criteria for microplastic effect studies in the context of risk assessment: a critical review. Environ. Sci. Technol. 54: 11692–11705.